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School of Forestry
University of Idaho
Moscow, Idaho

August 3, 1929

Memorandum to National Forest Officers of D. 1 and D. 6.

Subject:- Douglas Fir Tussock Moth.

On a recent trip into the Northport, Wn. area inspecting fume damaged timber a very noticeable defoliation of Douglas fir trees was noted on Squaw Creek above the Richardson place and spreading across the east boundary of the National Forest in that area. At the time, June, 1929, the tiny caterpillars were not conspicuous, but the defoliation had already begun. On a subsequent trip, in company with Dr. R. Hopping of Canada and Mr. G. I. Bayle, made into the area extending from the American fork of Sheep Creek south to Fifteen Mile Creek, a heavy infestation of caterpillars was observed on the Douglas firs. The defoliation of Douglas fir in the Flat Creek area was almost complete at the time of the visit, July 24, 1929. The regions showing the heaviest defoliation contain almost pure stands of Douglas fir of various ages, and the large trees as well as the reproduction are almost entirely stripped of needles. In some places the droppings and severed needles falling to the ground sound like rain.

The infestation is widespread and appears to be spreading southward, eastward and westward. Dr. Hopping stated that a few small areas of infested Douglas fir have been under observation by him in the Okanogan

Lake region of British Columbia during 1927 and 1928. The infestation in the Upper Columbia river drainage undoubtedly is the result of a spread from British Columbia and attention is called to the possible spread of the insect into the more valuable Douglas fir stands of the Pacific Northwest.

The insect has been identified by Dr. Hopping as the Douglas fir tussock moth, Hemerocarpa pseudotsugata. The caterpillars, hatching early in great numbers, feed upon the needles, stripping everything from the twigs and wasting many of the needles in their rapid attack. When full grown they spin grayish white cocoons which are attached to the defoliated twigs. The cocoons were being formed at the time of the last visit to the area, July 24, and about a month later the moths emerge. The female moths lay their eggs on the old coccons and this characteristic is an aid in identifying this type of damage in seasons when the caterpillars are absent. The principal food is the Douglas fir but the lowland white fir and the alpine fir are also attacked.

Evidence was found of the presence of this insect last year in the areas visited in northeastern Washington. Many trees were found to have been killed by the attack and the areas attacked this year will be watched with interest to note the percentage of killed trees. The speed with which the defoliation is carried on and the stripping of all needles from most of the trees marks this insect epidemic as a very serious one. The attack is usually begun at the tops of the trees, the caterpillars gradually working downward until the tree is bare of needles. Infested areas of timber, when viewed from a distance, have a grayish green appearance, the

result of top defoliation, and usually these areas can be distinguished from the grayish patches of dead timber.

Doubtless, other reports of this new menace to our forests have been received but the rapid and extensive attack of this insect warrants a note of this kind, particularly since it is already present in large numbers and causing considerable damage on National forest areas in Washington.

E.E. H.
Ernest E. Hubert
Professor of Forestry.